Claim 1

Claim 1 is the only independent claim. It has been amended for clarity. Applicants contend that neither the original nor the amended claim 1 are obvious from the cited art.

The citation of Nagane et al. in the Office Action spans separate, distinct disclosures, without pointing to any place in Nagane et al. suggesting that they be combined as in they are the Office Action. In particular, the Office Action refers to substrate 106, and electrodes 110 and 111, and LED 107 formed on the surface of substrate 110. These all relate to what Nagane et al. calls the "original illuminating device" or "original reading device" which is described as "background technique of the present invention." (*See, e.g.,* col. 1, lines 40-42; col. 5, lines 66-68) Nagane et al. is critical of this arrangement. (*See, e.g.,* col. 2, lines 17-59; col. 3, line 31 – col. 4, line 27)

The Office Action refers to "A seal 50 [in Nagane et al.] which is disposed in a periphery of the substrate (col. 9, lines 34-35)." First, we note that the cited disclosure relates to a different structure from that referred to above, that of Fig. 9. Second, we do not find any such "seal" described at the cited place. Rather, 50 identifies a condenser lens. Nagane et al. states in column 9, lines 34 to 39 that "the condenser lens 50 contacts the substrate 8a only at a few boss portions. The other portion of the condenser 50 is separated from the substrate 8a. Thus, an opening to allow the circulation of air is formed in a direction orthogonal to the longitudinal direction of the condenser 50." This disclosure is the antithesis of a "seal." Its teaching is in contrast with the present invention in which a sealed space is created between the transparent substrate sealed over the substrate.

The Office Action admits on page 3 that "Nagane et al. do not disclose a transparent substrate," but later asserts that it would be obvious from Liu et al. to "have an aluminum oxide transparent substrate in Nagane's device...." The Office Action overlooks the facts that the cited part of Liu discloses only a single, transparent substrate, and that neither cited reference teaches or suggests the Applicants' claimed combination in which there is both a substrate and a transparent substrate as separate elements.

Dependent Claims

Claim 2 has been cancelled and rewritten as claim 17 for greater clarity and to eliminate redundancies. Contrary to the suggestion in the Office Action, the *combination* of claim 2 (now claim 17) is not an obvious substitution of a cheaper material. Rather, the substitution is made practical by enclosing the electrodes as claimed.

Claim 3 has been cancelled and rewritten as claim 18 for greater clarity and to eliminate redundancies. The statement in the Office Action regarding claim 3 (now claim 18) is not understood, the Office Action having previously admitted at page 3 that "Nagane et al. does not disclose a transparent substrate."

Claim 4 has been amended for greater clarity. With regard to claim 4 and 13, the Examiner contends that it would have been obvious to fill the space created by the condenser lens with inert gas. However, as stated above, the condenser lens 50 of Nagane et al. is not sealed to the substrate, but has openings. Therefore, it would not be possible to fill the space with inert gas.

Claim 5 has been amended in response to the §112, ¶2 rejection and for greater clarity.

The Office Action comment with respect to claim 7 does not address the claimed combination. The Office Action says that "Nagane et al. disclose the condenser lens 50 abuts the substrate (Fig. 9)." That, however, does not disclose, teach or suggest the combination of claim 7 in which the lens-shaped light transmitting resin abuts "said transparent substrate", which is one of two claimed "substrates."

Claim 8 has been amended in response to the §112, ¶2 rejection and for greater clarity. The term "matrix array" is a well-known term of art. Contrary to the suggestion in the Office Action, Nagane et al. does not disclose, teach or suggest inclining substrates at both ends of a matrix with respect to a centrally located one.

Claim 9 was rejected under §112, ¶2 with the statement "it is unclear how the light is reflected by the seal." If the sealing material is placed at the periphery of the hybrid integrated circuit device substrate, between that substrate and the transparent substrate, and an LED is placed between those substrates—as claimed—a reflective seal material will reflect light from the LED. The Office Action comment with respect to claim 9 is not understood because—as previously explained—the condenser lens in Nagane et al. does not form a seal.

Claim 14 was rejected under §112, ¶2 with the statement "it is unclear what is a 'solder resist." That is a well-known term for a coating which resists adhesion by solder. Claim 14 has been amended for greater clarity.

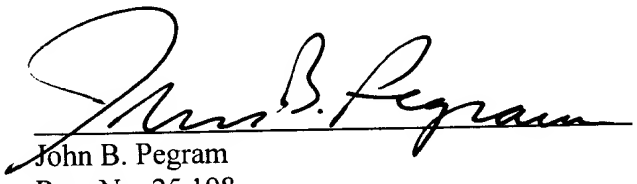
Claim 15 has been amended for greater clarity.

Claim 16 has been amended for greater clarity.

Attached is a marked-up version of the changes being made by the current amendment.

Applicant asks that all claims be allowed. Please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,



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Version with markings to show changes made

In the claims:

Claims 2 and 3 have been cancelled and rewritten as new claims 17 and 18 respectively.

Claims 1, 4, 5, 8, 14-16 have been amended as follows:

1. (Amended) A hybrid integrated circuit device comprising:

a hybrid integrated circuit substrate in which at least a surface is provided with insulation;

a first electrode and a second electrode formed on [the] said surface;

a light emitting element connected with the first and second electrode;

a seal which is disposed in a periphery of said substrate; and

a transparent substrate which is fixed to said hybrid integrated circuit substrate via said seal to enclose the first and second electrodes and the light emitting element within a sealed space formed between said hybrid integrated circuit substrate and said transparent substrate.

4. (Amended) A hybrid integrated circuit device according to claim 1, [wherein] further comprising a gas for preventing said light emitting element and/or said electrodes from deteriorating [is] , said gas filling[ed] [into a] the space defined by said substrate[,] said transparent substrate, and said seal.

5. (Amended) A hybrid integrated circuit device according to claim 1, [wherein] further comprising a spacer [which is] made of an insulating material which is disposed inside said seal between said hybrid integrated circuit substrate and said transparent substrate.

8. (Amended) A consolidated hybrid integrated circuit device according to claim [3] 17 wherein said hybrid integrated circuit substrates are arranged in a matrix [form] array and at least end ones of said hybrid integrated circuit substrates are inclined at a predetermined angle with respect to a [center] centrally located [one of said] hybrid integrated circuit substrate[s].

14. (Amended) A hybrid integrated circuit device according to claim 1, wherein the surface of the hybrid integrated circuit substrate is covered with solder resist.

15. (Amended) A hybrid integrated circuit device according tok claim 1, wherein the hybrid integrated circuit substrate is made of glass.

16. (Amended) A consolidated hybrid integrated circuit device according to claim 8, wherein the substrates are arranged in a matrix [form] array and at least both end substrates is inclined in vertical and lateral directions so as to [realize] approximate a paraboloid, and an object to be heated is disposed in a [focus] focal point of the paraboloid [surface].

17. (New) A hybrid integrated circuit device according to claim 1 wherein:

said first electrode is formed on a region of said surface of the hybrid integrated circuit substrate and said first electrode is made of copper covered with an oxidation resistant metal;

said second electrode is formed on another region of said surface of the hybrid integrated circuit substrate and said second electrode is made of copper covered with an oxidation resistant metal;

a rear face of said light emitting element is electrically connected to said first electrode; and

further comprising an electrical connection between said second electrode and an electrode on a surface of said light emitting element.

18. (New) A consolidated hybrid integrated circuit device comprising a plurality of hybrid integrated circuit devices according to claim 1 wherein:

said first electrode is formed on a region of said surface of the hybrid integrated circuit substrate and said first electrode is made of copper covered with an oxidation resistant metal;

said second electrode is formed on another region of said surface of the hybrid integrated circuit substrate and said second electrode is made of copper covered with an oxidation resistant metal;

a rear face of said light emitting element is electrically connected to said first electrode; and

further comprising an electrical connection between said second electrode and an electrode on a surface of said light emitting element; and

electrical connections between said first electrodes and between said second electrodes.